

REPLACED BY
ART 34 AMDT

10 / 524720
DT01 Rec'd PGT/PTC 16 FEB 2005

ENGLISH TRANSLATION
OF THE ANNEXES TO THE
INTERNATIONAL PRELIMINARY
EXAMINATION REPORT

CLAIMS

1. A fuel cell separator for sandwiching from both sides via diffusion layers an anode and a cathode set against an electrolyte film, characterized in that it is made of a mixture of a thermoplastic resin selected from among ethylene / vinyl acetate copolymers and ethylene / ethyl acrylate copolymers and at least one type of carbon particles selected from Ketjen black, graphite and acetylene black.
2. A fuel cell separator according to claim 1, characterized in that the proportion of the thermoplastic resin in the mixture is 14 to 20wt% and the proportion of the carbon particles is 80 to 86wt%.
3. A fuel cell separator according to claim 2, characterized in that 3 to 20wt% of the carbon particles is Ketjen black.
4. A fuel cell separator according to claim 1, characterized in that the proportion of the thermoplastic resin in the mixture is 14 to 20wt%, the proportion of the carbon particles is 70 to 83.5wt%, and a proportion of glass fiber or carbon fiber is 2.5 to 10wt%.
5. A method for manufacturing a fuel cell separator,

REPLACED BY
ART-34 AMDT

comprising:

a step of selecting a thermoplastic resin from among ethylene / vinyl acetate copolymers and ethylene / ethyl acrylate copolymers and selecting at least one type of carbon particles from Ketjen black, graphite and acetylene black;

a step of obtaining a mixture by mixing the selected thermoplastic resin and carbon particles;

a step of obtaining a sheet material by extrusion-molding the mixture with an extruder;

a step of forming gas flow passage grooves in the surface of the sheet material by pressing it; and

a step of obtaining fuel cell separators by cutting the sheet material with the gas flow passages formed in it to a predetermined shape.

6. A fuel cell separator for sandwiching from both sides via diffusion layers an anode and a cathode set against an electrolyte film, characterized in that it is made of a mixture including 10 to 34wt% polyphenylene sulfide, 65 to 80wt% graphite, and 1 to 10wt% Ketjen black.

7. A fuel cell separator according to claim 6, characterized in that the mixture further includes 5 to 15wt% chopped carbon fiber and the graphite included in the mixture is made 60 to 80wt%.

REPLACED BY
ART 34 ANDT

8. A fuel cell separator according to claim 7, characterized in that the viscosity of the polyphenylene sulfide is 20 to 80psi.